Memorandum

From: Denis Lawrence **Date:** 16 July 2018

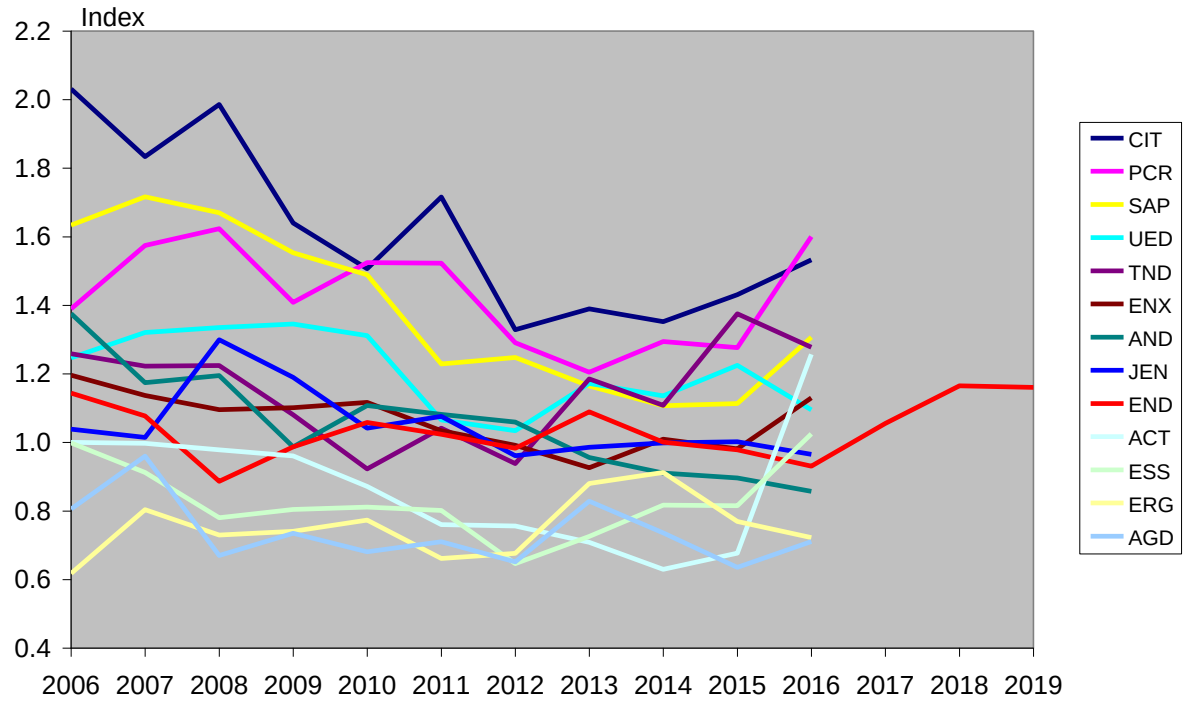
To: AER Opex Team

Subject: Assessment of Endeavour Energy's proposed base year opex

Economic Insights has been asked to undertake additional economic benchmarking modelling to assess the likely efficiency of END's proposed base year opex. To do this we have extended the economic benchmarking modelling from the AER (2017) Annual Benchmarking Report to include actual data for END for 2017 and forecast data for END for 2018 and 2019.

Opex MPFP results are presented in figure 1. END lay in 10th place in terms of opex MPFP levels in 2016. END's opex MPFP level then increased by 13.4 per cent in 2017 (noting that this still included some degree of redundancy payments). It then increases by a further 10.4 per cent in 2018 (based on its forecast opex) and stays at a similar level in 2019. If we compare END's opex MPFP level in 2018 with those of the other DNSPs in 2016, END would lie in sixth position, behind PCR, CIT, SAP, TND and ACT and just ahead of ENX.

Figure 1: **DNSP multilateral opex partial productivity indexes, 2006–2016, with END forecast to 2019**



Turning to the econometric cost function analysis, the SFACD parameters from the AER (2017) Annual Benchmarking Report are combined with the actual and forecast outputs for END to roll forward END's mid–point target opex to 2017–2019 and END's actual and

forecast opex are compared with that target series. In the first instance the same operating environment factor margin of 12.9 per cent is used as that adopted in the AER (2015) END Final Determination modelling. END would still require a significant cut to its opex in 2016 and a small cut to its opex in 2017 to achieve the target levels of opex but it does better than the 2018 and 2019 target opex levels based on its forecast opex for 2018 and 2019 (ie it would not require cuts to its opex in those years). Relevant data are presented in table 1.

Table 1: **END target, actual and forecast opex with 12.9 per cent OEF, 2016–2019**

Year	*2016*	*2017*	*2018*	*2019*
Target opex ($'000RY2016)	255,889	264,106	273,409	281,308
Including redundancies:				
Actual/forecast opex ($'000RY2016)	295,663	271,006	248,710	252,754
Opex reduction to achieve target ($'000RY2016)	39,774	6,984	0	0
Opex reduction to achieve target (%)	13.5%	2.6%	0.0%	0.0%
Excluding redundancies:				
Actual/forecast opex ($'000RY2016)	265,928	[redacted]	[redacted]	[redacted]
Opex reduction to achieve target ($'000RY2016)	10,038	[redacted]	[redacted]	[redacted]
Opex reduction to achieve target (%)	3.8%	[redacted]	[redacted]	[redacted]

If redundancies were excluded from END's opex, a cut would still be required to END's opex in 2016 to achieve the target opex level but the target is now achieved in 2017, as well as in 2018 and 2019. The cut required in 2016 is, of course, smaller than the one that would be required based on END opex including redundancies (see table 1 above).

Table 2: **END target, actual and forecast opex with 6.3 per cent OEF, 2016–2019**

Year	*2016*	*2017*	*2018*	*2019*
Target opex ($'000RY2016)	240,930	248,667	257,426	264,863
Including redundancies:				
Actual/forecast opex ($'000RY2016)	295,663	271,006	248,710	252,754
Opex Reduction to achieve target ($'000RY2016)	54,733	22,419	0	0
Opex Reduction to achieve target (%)	18.5%	8.3%	0.0%	0.0%
Excluding redundancies:				
Actual/forecast opex ($'000RY2016)	265,928	[redacted]	[redacted]	[redacted]
Opex Reduction to achieve target ($'000RY2016)	24,997	[redacted]	[redacted]	[redacted]
Opex Reduction to achieve target (%)	9.4%	[redacted]	[redacted]	[redacted]

We also examined the use of a smaller set of 'core' OEFs which include subtransmission, license conditions, OH&S and termites but exclude the accumulated other and capitalisation components used in the AER (2015) END Final Determination. The core OEFs lead to an OEF margin of 6.3 per cent (instead of 12.9 per cent) in setting the target. Larger cuts to END's opex would be required to achieve the target opex levels in 2016 and 2017 but no cuts would be required in 2018 and 2019. That is, the forecast 2018 and 2019 END opex levels

achieve the target in 2018 and 2019, even with the much less generous OEF treatment. The results are presented in table 2.

The opex MPFP results are presented in the file 'Economic Insights AER END Opex MPFP Results 16Jul2018.xls'. It should be noted that the opex MPFP analysis includes two additional outputs (energy throughput and reliability) compared to the cost function analyses but includes less adjustment for operating environment differences. The results for the SFACD cost function analysis using 12.9 per cent OEF are presented in the file 'Opex base year adjustment END Full OEFs 16Jul 2018.xlsx' while the results using the core OEF of 6.3 per cent are presented in the file 'Opex base year adjustment END Core OEFs 16Jul2018.xlsx'.

References

Australian Energy Regulator (AER) (2015), *Final Decision: Endeavour Energy Distribution Determination 2014–15 to 2018–19 – Attachment 7: Operating Expenditure*, Melbourne, April.

Australian Energy Regulator (AER) (2017), *Annual benchmarking report – Electricity distribution network service providers*, Melbourne, November.

Economic Insights (2017), *Economic Benchmarking Results for the Australian Energy Regulator's 2017 DNSP Benchmarking Report*, Report prepared by Denis Lawrence, Tim Coelli and John Kain for the Australian Energy Regulator, Eden, 31 October.